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## Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in this application.

## **Listing of Claims:**

- 1. (Currently Amended) A method of maintaining activity in a router to keep the router from entering a lock-up state, comprising the steps of:
- (a) sending, from a user computer, via the router, a request toward a backbone of a network to which a response is expected;
  - (b) determining, in the user computer, whether the response has been received;
- (c) if no response has been received, displaying a notification message on the user computer indicating that network access to the network is unavailable; and
  - (d) periodically repeating at least steps (a) and (b).
  - 2. (Original) The method of claim 1, wherein the request comprises a ping command.
- 3. (Currently Amended) The method of claim 4 2, wherein an Internet Protocol (IP) address is used as a destination address for a the ping command.
- 4. (Currently Amended) The method of claim 1, wherein the request comprises <u>one of</u> a primary Internet Protocol (IP) address and a secondary IP address that <u>are is</u> used in conjunction with a ping command.

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5. (Original) The method of claim 1, wherein the step of displaying a notification message comprises a pop-up window.

- 6. (Original) The method of claim 1, wherein the method is implemented with one of computer software, firmware, or a combination thereof.
- 7. (Original) The method of claim 6, wherein the software is downloaded from the Internet.
- 8. (Currently Amended) The method of claim 1, further comprising the <u>a</u> step of determining if on an immediately preceding iteration no response was received and, if so, displaying a notification message indicating that network access has been restored.
  - 9. (Original) The method of claim 1, wherein the network is the Internet.
- 10. (Currently Amended) In a network having a plurality of <u>user</u> computers in communication with a router, the router being in communication with a Digital Subscriber Line (DSL), the DSL carrying data to and from at least one of the plurality of <u>user</u> computers over the Internet and carrying voice signals to and from a telephone, a method of keeping the router in an operable state, comprising the steps of:

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(a) periodically sending from at least one of the <u>user</u> computers <u>towards a DSL Access</u>

<u>Multiplexer (DSLAM)</u> a request to which a response is expected, the request being sent through the router;

- (b) determining if the response is received;
- (c) displaying a first notification message on the at least one user computer when no response is received; and
- (d) displaying a second notification message on the at least one user computer when the response is received.
  - 11. (Original) The method of claim 10, wherein the request is sent every 5-10 minutes.
  - 12. (Original) The method of claim 10, wherein the request comprises a ping command.
- 13. (Currently Amended) The method of claim 12, wherein an Internet Protocol (IP) address is used as a destination address for the ping command.
- 14. (Currently Amended) The method of claim 10, wherein the request comprises one of a primary Internet Protocol (IP) address and a secondary IP address that are is used in conjunction with a ping command.

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15. (Original) The method of claim 10, wherein the step of displaying a notification message comprises a pop-up window.

- 16. (Original) The method of claim 10, wherein the method is implemented with one of computer software, firmware, or a combination thereof.
- 17. (Original) The method of claim 16, wherein the computer software is operable within a multi-tasking computer operating system.
- 18. (Original) The method of claim 16, wherein the computer software, firmware or combination thereof is automatically launched when the computer is booted.
- 19. (Original) The method of claim 16, wherein the software is downloaded from the Internet.
- 20. (Currently Amended) A method of notifying an end user of the status of his Internet access, comprising the steps of:
- (a) pinging an Internet Protocol (IP) address from a computer <u>belonging to the end user</u>

  and connected to a local area network which is in turn connected to a router;
  - (b) determining if a response to the pinging is received; and

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(c) displaying a first message indicating that the user's Internet access is unavailable if no response is received, and displaying a second message indicating that the user's Internet access is restored when a response is received, after not receiving a response to a previous pinging.

- 21. (Original) The method of claim 20, wherein steps (a)-(c) are automatically repeated.
- 22. (Original) The method of claim 21, wherein repeated pinging keeps the router from entering a lock-up state.
- 23. (Original) The method of claim 20, wherein the method is implemented in one of software, firmware, or a combination thereof.
- 24. (Original) The method of claim 23, wherein the software is downloaded from the Internet.
- 25. (Original) The method of claim 23, wherein the computer software, firmware or a combination thereof is automatically launched when the computer is booted.
- 26. (Original) The method of claim 20, wherein the computer software is operable within a multi-tasking computer operating system.

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27. (Currently Amended) In a network having a plurality of <u>end user</u> computers in communication with a router, the router being in communication with a Digital Subscriber Line (DSL), the DSL carrying data to and from at least one of the plurality of <u>end user</u> computers over the Internet and carrying voice signals to and from a telephone, a system for keeping the router in an operable state, comprising:

- (a) means for periodically sending from at least one of the <u>end user</u> computers <u>towards a</u>

  <u>DSL Access Multiplexer (SLAM)</u> a request to which a response is expected, the request being sent through the router;
  - (b) means for determining if the response is received;
- (c) means for displaying a first notification message on the at least one end user computer when no response is received; and
- (d) means for displaying a second notification message on the at least one end user computer when the response is received.
  - 28. (Original) The system of claim 27, wherein the request is sent every 5-10 minutes.
  - 29. (Original) The system of claim 27, wherein the request comprises a ping command.
- 30. (Currently Amended) The system of claim 29, wherein an Internet Protocol (IP) address is used as a destination address for the ping command.

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31. (Currently Amended) The system of claim 27, wherein the request comprises one of a primary Internet Protocol (IP) address and a secondary IP address that are is used in conjunction with a ping command.

- 32. (Original) The system of claim 27, wherein the notification message is in the form of a pop-up window.
- 33. (Original) The system of claim 27, wherein the means for elements (a)-(d) comprises one of computer software, firmware, or a combination thereof.
- 34. (Original) The system of claim 33, wherein the computer software, firmware or the combination thereof is operable within a multi-tasking computer operating system.
- 35. (Original) The system of claim 33, wherein the computer software, firmware or combination thereof is automatically launched when the computer is booted.

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